Screenings Platform for Easy Surface Modification of Polymers

Andersen, Christian; Daugaard, Anders E.

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Christian Andersen and Anders E. Daugaard
Danish Polymer Centre, Department of Chemical and Biochemical Engineering, Technical University of Denmark, 2800 Kongens Lyngby, Denmark

The modification of polymer surfaces is an important way to alter surface properties to fit a desired application and is used, among others, to give adhesive properties, chemical resistance, reduced friction, hydrophilicity, biocompatibility etc. However, most polymer surfaces are relatively inert and to allow for attachment of the modifying species, activation is generally needed. This can be achieved via many different techniques such as plasma activation or grafting to/from methods[1,2].

In this project, we present a unique platform that in a feasible and easy manner, allows for surface modification of various polymer surfaces. The design of the setup makes it possible for a fast and systematic screening of many different monomer compositions. The system was used to evaluate the influence of the chemical feed composition in relation to the acquired surface properties. Confirmation of the modifications on the surfaces was done by Fourier transform infrared spectroscopy (FT-IR) and water contact angle measurements (WCA).

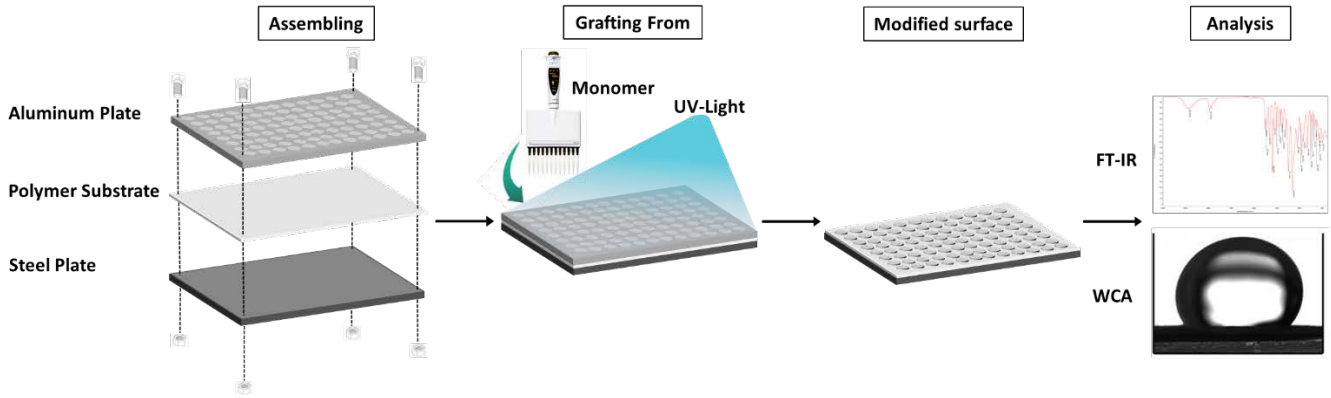

Figure 1 Schematic representation of screening platform procedure.

References

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